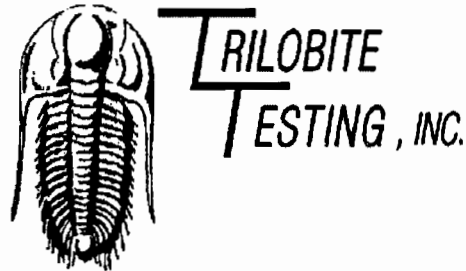


15-135-24274

21-17s-22w



DRILL STEM TEST REPORT

Prepared For: **Northern Lights Oil**

PO Box 164
Andover, Ks 67002

ATTN: Northern Lights Oil

21-17-22 Ness,Ks

Mary #1

Start Date: 2004.04.25 @ 14:08:22

End Date: 2004.04.25 @ 18:08:06

Job Ticket #: 18116 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Northern Lights Oil

PO Box 164
Andover, Ks 67002

ATTN: Northern Lights Oil

Mary #1

21-17-22 Ness, Ks

Job Ticket: 18116

DST#: 1

Test Start: 2004.04.25 @ 14:08:22

GENERAL INFORMATION:

Formation: **cherokee**

Deviated: **No** Whipstock: **ft (KB)**

Time Tool Opened: 16:10:00

Time Test Ended: 18:08:06

Test Type: **Conventional Bottom Hole**

Tester: **Shane McBride**

Unit No: **25**

Interval: **4247.00 ft (KB) To 4282.00 ft (KB) (TVD)**

Total Depth: **4282.00 ft (KB) (TVD)**

Hole Diameter: **7.88 inches** Hole Condition: **Fair**

Reference Elevations: **2282.00 ft (KB)**

2277.00 ft (CF)

KB to GR/CF: **5.00 ft**

Serial #: 6720 **Inside**

Press@RunDepth: **psig @ 4248.00 ft (KB)**

Start Date: **2004.04.25**

End Date:

2004.04.25

Start Time: **14:08:22**

End Time:

18:08:06

Capacity: **7000.00 psig**

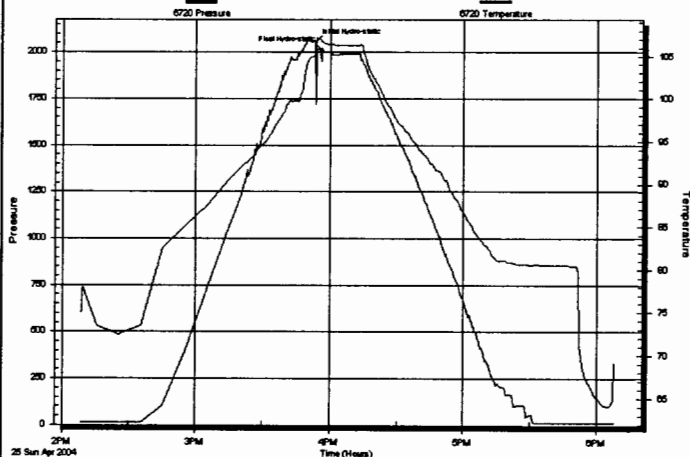
Last Calib.: **1899.12.30**

Time On Btrn: **2004.04.25 @ 15:53:21**

Time Off Btrn: **2004.04.25 @ 15:56:21**

TEST COMMENT: Packers failed reset failed again pull tool

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2054.11	104.97	Initial Hydro-static
3	2012.08	106.77	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
398.00	mud 100% m	3.32

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
--	----------------	-----------------	------------------



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Northern Lights Oil

Mary #1

PO Box 164
Andover, Ks 67002

21-17-22 Ness, Ks

Job Ticket: 18116

DST#: 1

ATTN: Northern Lights Oil

Test Start: 2004.04.25 @ 14:08:22

Tool Information

Drill Pipe:	Length: 3982.00 ft	Diameter: 3.80 inches	Volume: 55.86 bbl	Tool Weight:	1500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	30000.00 lb
Drill Collar:	Length: 248.00 ft	Diameter: 2.25 inches	Volume: 1.22 bbl	Weight to Pull Loose:	80000.00 lb
			<u>Total Volume: 57.08 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial	65000.00 lb
Depth to Top Packer:	4247.00 ft			Final	66000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	35.00 ft				
Tool Length:	62.00 ft				
Number of Packers:	2	Diameter:	6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
------------------	-------------	------------	----------	------------	----------------

Change Over Sub	1.00			4221.00	
Shut In Tool	5.00			4226.00	
Hydraulic tool	5.00			4231.00	
Jars	5.00			4236.00	
Safety Joint	2.00			4238.00	
Packer	5.00			4243.00	27.00 Bottom Of Top Packer
Packer	4.00			4247.00	
Stubb	1.00			4248.00	
Recorder	0.00	6720	Inside	4248.00	
Perforations	29.00			4277.00	
Recorder	0.00	2023	Outside	4277.00	
Bullnose	5.00			4282.00	35.00 Bottom Packers & Anchor

Total Tool Length: 62.00



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Northern Lights Oil

Mary #1

PO Box 164
Andover, Ks 67002

21-17-22 Ness, Ks

Job Ticket: 18116

DST#: 1

ATTN: Northern Lights Oil

Test Start: 2004.04.25 @ 14:08:22

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

3500 ppm

Viscosity: 45.00 sec/qt

Cushion Volume:

bbl

Water Loss: 7.17 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 3500.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
398.00	mud 100% m	3.324

Total Length: 398.00 ft

Total Volume: 3.324 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

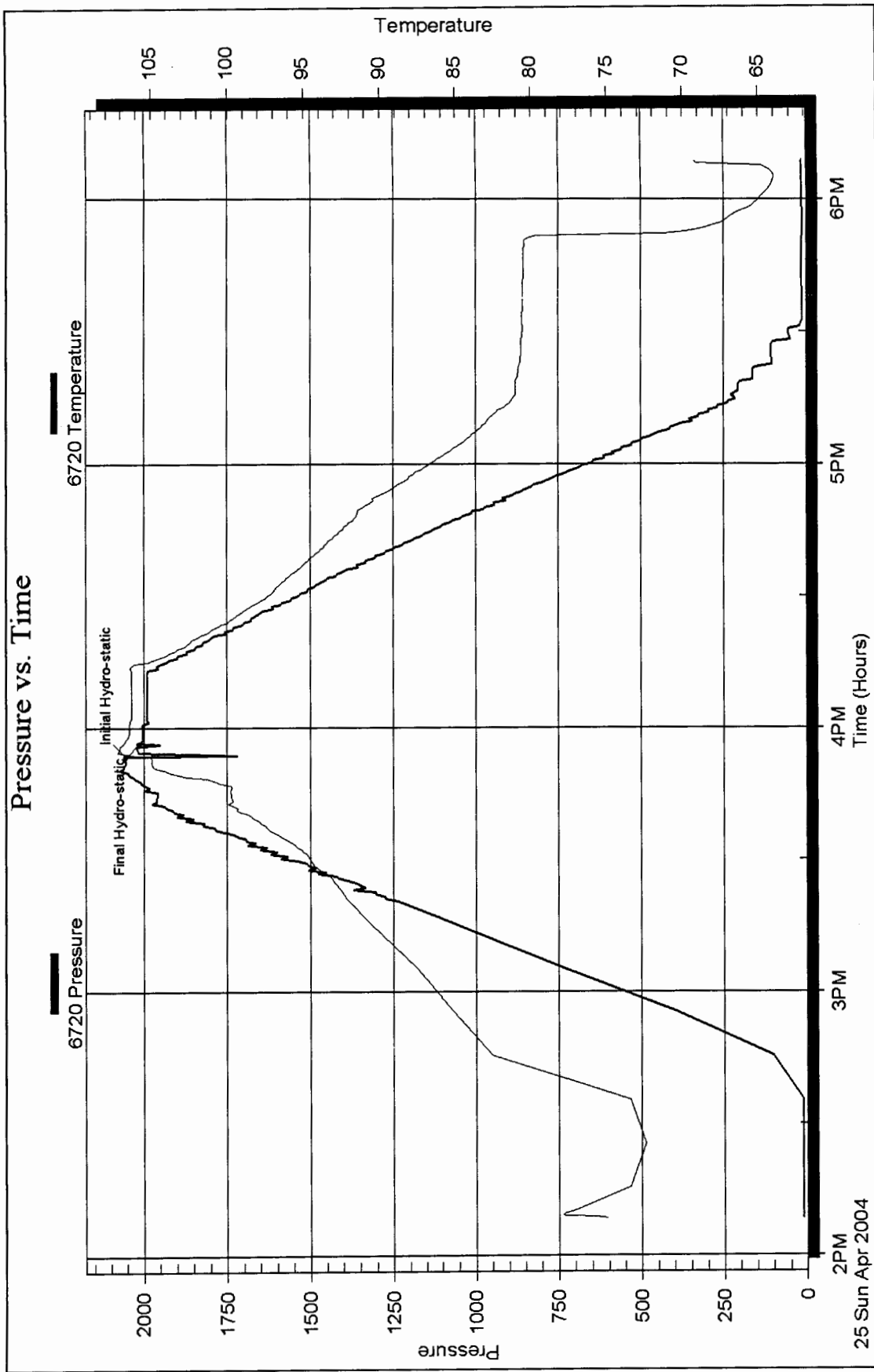
Serial #: 6720

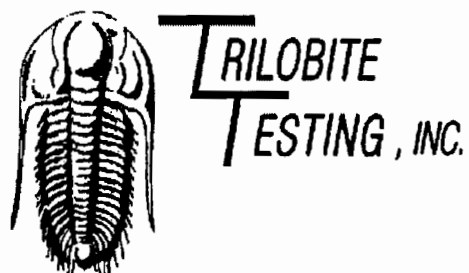
Inside

Northern Lights Oil

21-17-22 Ness,Ks

DST Test Number: 1





DRILL STEM TEST REPORT

Prepared For: **Northern Lights Oil**

PO Box 164
Andover, Ks 67002

ATTN: Northern Lights Oil

21-17-22 Ness, Ks

Mary #1

Start Date: 2004.04.25 @ 18:45:27

End Date: 2004.04.26 @ 02:04:26

Job Ticket #: 18117 DST #: 2

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Northern Lights Oil

Mary #1

PO Box 164
Andover, Ks 67002

21-17-22 Ness, Ks

Job Ticket: 18117

DST#: 2

ATTN: Northern Lights Oil

Test Start: 2004.04.25 @ 18:45:27

GENERAL INFORMATION:

Formation: **cherokee**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:47:11

Time Test Ended: 02:04:26

Test Type: Conventional Bottom Hole

Tester: Shane McBride

Unit No: 25

Interval: 4204.00 ft (KB) To 4282.00 ft (KB) (TVD)

Total Depth: 4282.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2282.00 ft (KB)

2277.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 6720 Inside

Press@RunDepth: 188.60 psig @ 4205.00 ft (KB)

Start Date: 2004.04.25

End Date:

2004.04.26

Start Time: 18:45:27

End Time:

02:04:26

Capacity: 7000.00 psig

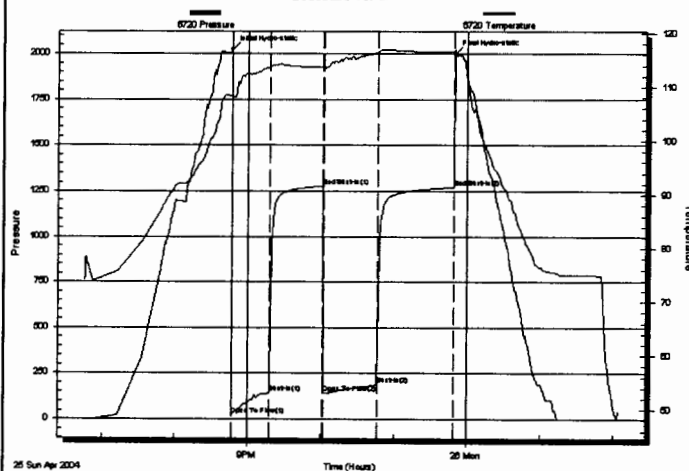
Last Calib.: 1899.12.30

Time On Btm: 2004.04.25 @ 20:46:41

Time Off Btm: 2004.04.25 @ 23:49:26

TEST COMMENT: 1/2" in. @ open built to 10" in.
No return
Surface blow built to 8" in.

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2022.44	108.31	Initial Hydro-static
1	23.50	107.85	Open To Flow (1)
32	140.73	113.65	Shut-In (1)
75	1277.06	113.72	End Shut-In (1)
76	139.93	113.51	Open To Flow (2)
120	188.60	116.49	Shut-In (2)
182	1271.34	116.59	End Shut-In (2)
183	2000.02	116.97	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
428.00	s g h o c m 5%g 45%o 50%m	3.74

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
--	----------------	-----------------	------------------



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Northern Lights Oil

Mary #1

PO Box 164
Andover, Ks 67002

21-17-22 Ness, Ks

Job Ticket: 18117

DST#: 2

ATTN: Northern Lights Oil

Test Start: 2004.04.25 @ 18:45:27

Tool Information

Drill Pipe:	Length: 3952.00 ft	Diameter: 3.80 inches	Volume: 55.44 bbl	Tool Weight: 1500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 30000.00 lb
Drill Collar:	Length: 248.00 ft	Diameter: 2.25 inches	Volume: 1.22 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 56.66 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	23.00 ft			String Weight: Initial 65000.00 lb
Depth to Top Packer:	4204.00 ft			Final 67000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	78.00 ft			
Tool Length:	105.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4178.00	
Shut In Tool	5.00			4183.00	
Hydraulic tool	5.00			4188.00	
Jars	5.00			4193.00	
Safety Joint	2.00			4195.00	
Packer	5.00			4200.00	27.00 Bottom Of Top Packer
Packer	4.00			4204.00	
Stubb	1.00			4205.00	
Recorder	0.00	6720	Inside	4205.00	
Perforations	39.00			4244.00	
Change Over Sub	1.00			4245.00	
Drill Pipe	31.00			4276.00	
Change Over Sub	1.00			4277.00	
Recorder	0.00	2023	Outside	4277.00	
Bullnose	5.00			4282.00	78.00 Bottom Packers & Anchor

Total Tool Length: 105.00



TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

FLUID SUMMARY

Northern Lights Oil

Mary #1

PO Box 164
Andover, Ks 67002

21-17-22 Ness, Ks

Job Ticket: 18117

DST#: 2

ATTN: Northern Lights Oil

Test Start: 2004.04.25 @ 18:45:27

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

3500 ppm

Viscosity: 45.00 sec/qt

Cushion Volume:

bbl

Water Loss: 7.16 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 3500.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
428.00	s g h o c m 5%g 45%o 50%m	3.745

Total Length: 428.00 ft

Total Volume: 3.745 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

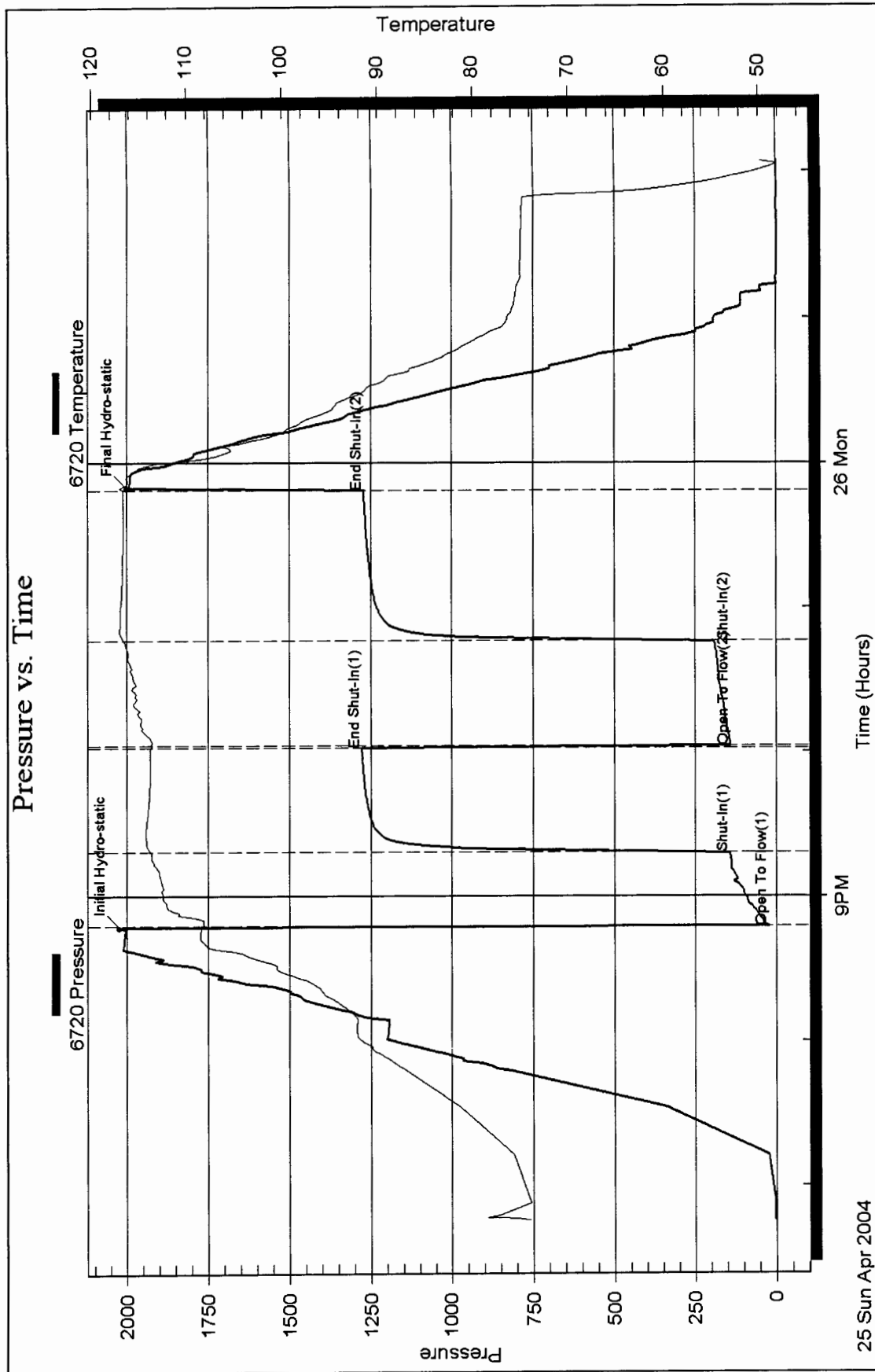
Serial #:

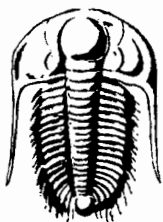
Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time





TRILOBITE TESTING INC.

P.O. Box 362 • Hays, Kansas 67601

Nº 18116

05/03

Test Ticket

Well Name & No. Mary #1 Test No. #1 Date 4-25-04
 Company Northern Lights Oil Zone Tested Cherokee
 Address P.O. Box 164, Andover, Ks 67002 Elevation 2282' KB 2277' GL
 Co. Rep / Geo. Kurt Smith Cont. Mallard JV Est. Ft. of Pay _____ Por. _____ %
 Location: Sec. 21 Twp. 17S Rge. 22W Co. Ne5S State Ks
 No. of Copies Num. Distribution Sheet (Y, N) _____ Turnkey (Y, N) _____ Evaluation (Y, N) _____

Interval Tested 4247' 4282' Initial Str Wt./Lbs. 65,000 Unseated Str Wt./Lbs. 66,000
 Anchor Length _____ 35' Wt. Set Lbs. 30,000 Wt. Pulled Loose/Lbs. 80,000
 Top Packer Depth _____ 4242' Tool Weight 1500
 Bottom Packer Depth _____ 4247' Hole Size 7 7/8" ☒ Rubber Size 6 3/4" ☒
 Total Depth _____ 4282' Wt. Pipe Run _____ Drill Collar Run 248' XH
 Mud Wt. 9.1 LCM _____ Vis. 4/5 WL 7.2 Drill Pipe Size 4 1/2 XH Ft. Run 3982'
 Blow Description Packer failed tried to reset, failed again, Pull tool

Recovery - Total Feet 398' GIP _____ Ft. in DC 248 Ft. in DP 150'
 Rec. 398' Feet of mud %gas _____ %oil _____ %water 100 %mud
 Rec. _____ Feet of _____ %gas _____ %oil _____ %water _____ %mud
 Rec. _____ Feet of _____ %gas _____ %oil _____ %water _____ %mud
 Rec. _____ Feet of _____ %gas _____ %oil _____ %water _____ %mud
 Rec. _____ Feet of _____ %gas _____ %oil _____ %water _____ %mud
 BHT _____ °F Gravity _____ °API D @ _____ °F Corrected Gravity _____ °API
 RW _____ @ _____ °F Chlorides _____ ppm Recovery _____ Chlorides 3500 ppm System

(A) Initial Hydrostatic Mud	PSI	Recorder No.	<u>6720</u>	TestX	<u>600.00</u>
(B) First Initial Flow Pressure	PSI	(depth)	<u>4248'</u>	Elec. Rec. X	<u>150.00</u>
(C) First Final Flow Pressure	PSI	Recorder No.	<u>2023</u>	Jars X	<u>200.00</u>
(D) Initial Shut-In Pressure	PSI	(depth)	<u>4277'</u>	Safety Jt X	<u>50.00</u>
(E) Second Initial Flow Pressure	PSI	Recorder No.		Circ Sub X N/C	
(F) Second Final Flow Pressure	PSI	(depth)		Sampler	
(G) Final Shut-In Pressure	PSI	Initial Opening		Straddle	
(Q) Final Hydrostatic Mud	PSI	Initial Shut-In		Ext. Packer	

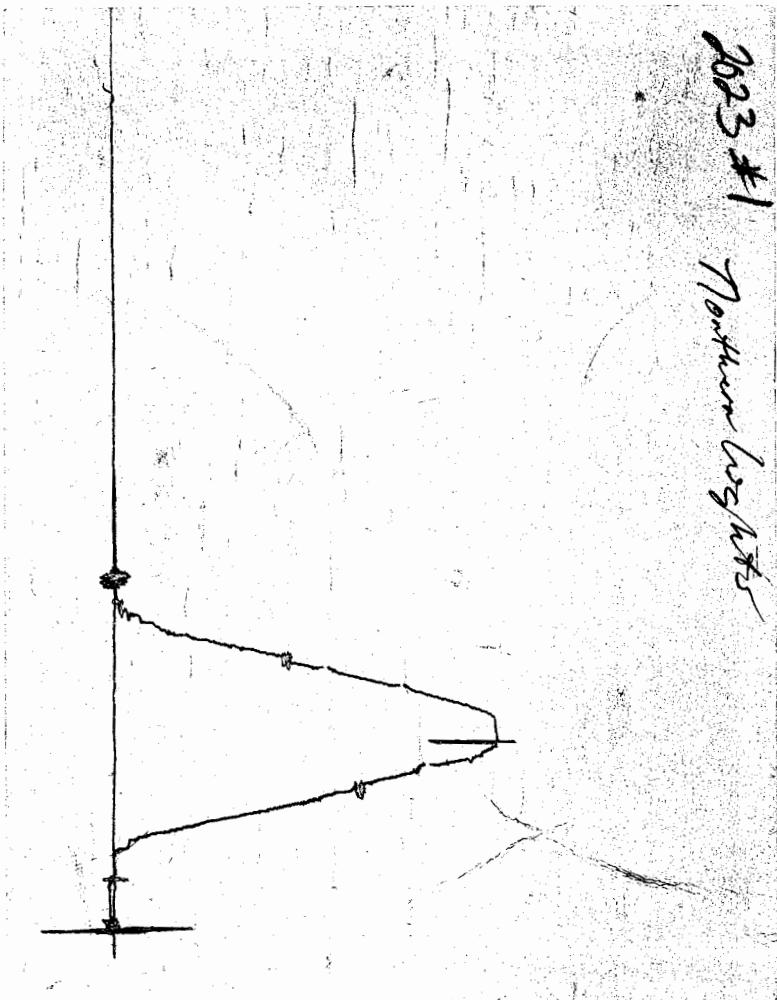
TRILOBITE TESTING INC. SHALL NOT BE LIABLE FOR DAMAGED OF ANY KIND OF THE PROPERTY OR PERSONNEL OF THE ONE FOR WHOM A TEST IS MADE, OR FOR ANY LOSS SUFFERED OR SUSTAINED, DIRECTLY OR INDIRECTLY, THROUGH THE USE OF ITS EQUIPMENT, OR ITS STATEMENTS OR OPINION CONCERNING THE RESULTS OF ANY TEST. TOOLS LOST OR DAMAGED IN THE HOLE SHALL BE PAID FOR AT COST BY THE PARTY FOR WHOM THE TEST IS MADE.

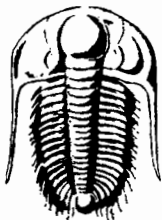
Approved By [Signature]
 Our Representative [Signature]

Final Flow _____
 Final Shut-In _____
 T-On Location 13:25 p.m.
 T-Started 14:25 p.m.
 T-Open 16:10 p.m.
 T-Pulled 16:15 p.m.
 T-Out 18:20 p.m.
 Mileage X73 \$73.00
 Sub Total: \$1073.00
 Std. By \$1124.10
 Other _____
 Total: \$9073.00

CHART PAGE

This is a photocopy of the actual AK-1 recorder chart





TRILOBITE TESTING INC.

P.O. Box 362 • Hays, Kansas 67601

N^o 18117

05/03

Test Ticket

Well Name & No. <u>Mary #1</u>	Test No. <u>#2</u>	Date <u>4-25-04</u>
Company <u>Northern Lights Oil</u>	Zone Tested <u>Cherokee</u>	
Address <u>P.O. Box 164, Andover, KS, 67002</u>	Elevation <u>2282'</u> KB	<u>2277'</u> GL
Co. Rep / Geo. <u>Kurt Smith</u>	Cont. <u>Mallard JV</u>	Est. Ft. of Pay _____ Por. _____ %
Location: Sec. <u>21</u> Twp. <u>17S</u> Rge. <u>22W</u> Co. <u>Neos</u>	State <u>Ks</u>	
No. of Copies <u>Thm</u> Distribution Sheet (Y, N) _____	Turnkey (Y, N) _____	Evaluation (Y, N) _____

Interval Tested 4204' 4282' Initial Str Wt./Lbs. 65,000 Unseated Str Wt./Lbs. 67,000
 Anchor Length _____ 78' Wt. Set Lbs. 30,000 Wt. Pulled Loose/Lbs. 80,000
 Top Packer Depth _____ 4199' Tool Weight 1500
 Bottom Packer Depth _____ 4204' Hole Size 7 7/8" ☒ Rubber Size 6 3/4" ☒
 Total Depth _____ 4282' Wt. Pipe Run _____ Drill Collar Run 248'
 Mud Wt. 9.1 LCM _____ Vis. 45 WL 7.2 Drill Pipe Size 4 1/2 XH Ft. Run 3952'
 Blow Description 1/2" in @ open built to 10" in.
No return

Surface blow built to 8" in.
1/2" in return blow

Recovery - Total Feet <u>428'</u>	GIP <u>120'</u>	Ft. in DC <u>248'</u>	Ft. in DP <u>180'</u>
Rec. <u>428'</u>	Feet of <u>Sg HOCM</u>	5 %gas <u>45</u> %oil	%water <u>50</u> %mud
Rec. _____	Feet of _____	%gas _____ %oil	%water _____ %mud
Rec. _____	Feet of _____	%gas _____ %oil	%water _____ %mud
Rec. _____	Feet of _____	%gas _____ %oil	%water _____ %mud
Rec. _____	Feet of _____	%gas _____ %oil	%water _____ %mud
BHT <u>117°</u>	°F Gravity _____	°API D @ _____	°F Corrected Gravity _____ °API
RW _____ @ _____ °F	Chlorides _____ ppm	Recovery <u>3500</u>	Chlorides <u>3,500</u> ppm System

(A) Initial Hydrostatic Mud	AK-1 <u>2022</u> PSI	Alpine	Recorder No. <u>6720</u>	Test <u>X</u>	<u>800.00</u>
(B) First Initial Flow Pressure	<u>23</u> PSI	(depth)	<u>4205'</u>	Elec. Rec. <u>Y</u>	<u>250.00</u>
(C) First Final Flow Pressure	<u>140</u> PSI	Recorder No. <u>2023</u>	Jars <u>X</u>	<u>200.00</u>	
(D) Initial Shut-In Pressure	<u>1277</u> PSI	(depth)	<u>4277'</u>	Safety Jt. <u>X</u>	<u>50.00</u>
(E) Second Initial Flow Pressure	<u>140</u> PSI	Recorder No. _____	Circ Sub <u>X N/C</u>		
(F) Second Final Flow Pressure	<u>188</u> PSI	(depth)	Sampler _____		
(G) Final Shut-In Pressure	<u>1271</u> PSI	Initial Opening <u>30</u>	Straddle _____		
(Q) Final Hydrostatic Mud	<u>2000</u> PSI	Initial Shut-In <u>45</u>	Ext. Packer _____		
		Final Flow <u>45</u>	Shale Packer _____		
		Final Shut-In <u>60</u>	Mileage _____		
		T-On Location <u>Shaved After #1</u>	Sub Total: <u>\$1200.00</u>		
		T-Started <u>18:45 p.m.</u>	Std. By _____		
		T-Open <u>20:45 p.m.</u>	Other _____		
		T-Pulled <u>23:45 p.m.</u>	Total: <u>\$1200.00</u>		
		T-Out <u>02:15 a.m.</u>			

TRILOBITE TESTING INC. SHALL NOT BE LIABLE FOR DAMAGED OF ANY KIND OF THE PROPERTY OR PERSONNEL OF THE ONE FOR WHOM A TEST IS MADE, OR FOR ANY LOSS SUFFERED OR SUSTAINED, DIRECTLY OR INDIRECTLY, THROUGH THE USE OF ITS EQUIPMENT, OR ITS STATEMENTS OR OPINION CONCERNING THE RESULTS OF ANY TEST. TOOLS LOST OR DAMAGED IN THE HOLE SHALL BE PAID FOR AT COST BY THE PARTY FOR WHOM THE TEST IS MADE.

Approved By [Signature]
 Our Representative [Signature]

CHART PAGE

This is a photocopy of the actual AK-1 recorder chart

